ON THE SCALE OF MAN'S NATURAL ENEMIES ON EARTH, EARTHQUAKES ARE OFTEN CONSIDERED THE MOST DAMAGING...
...BUT EARTHQUAKES ARE COMPARATIVELY RARE. IN FACT, MAN'S MOST DANGEROUS NATURAL ENEMY IS THE HURRICANE.
A SINGLE HURRICANE, FLORA, IN 1963 KILLED MORE THAN 7000 PEOPLE IN CUBA AND HAITI.
RECENT RESEARCH FOR THE FIRST TIME SUGGESTS THAT WAYS MAY BE FOUND TO UPSET AND DISSIPATE THE TITANIC FORCES INVOLVED IN HURRICANES — EQUAL TO HUNDREDS OF HYDROGEN BOMBS...
SCIENTISTS DESCRIBE A "MATURE" HURRICANE AS A SELF-CONTAINED, SELF-SUSTAINING SYSTEM OF ATMOSPHERIC CIRCULATION.
SECTION THROUGH CLOUD BANK
THE HEART OF THE HURRICANE IS A KIND OF "HEAT ENGINE", WHICH SUCKS IN WARM MOIST AIR AT SEA LEVEL, HURLS IT UPWARDS THROUGH A FUNNEL AND EXPELS IT INTO THE UPPER ATMOSPHERE.
THIS HEAT IS STORED IN THE FORM OF WATER VAPOR — THE TOWERING WALL OF CUMULO-NIMBUS CLOUDS ROUND THE CALM "EYE" OF THE HURRICANE.
THE ENERGY WHICH DRIVES THE HURRICANE BEGINS WITH THE HEAT INVOLVED IN THE EVAPORATION OF SEA-WATER IN THE TROPICS.

AS THE CLOUD WALL OF THE HURRICANE GROWS UPWARDS, THE WATER VAPOR CONDENSES INTO RAIN, RELEASING 90 PER CENT OF ITS LATENT HEAT.

THE HEAT RELEASED INTO THE UPPER ATMOSPHERE BY A HURRICANE IN ONE DAY ROUGHLY EQUALS THE ENERGY OF THE SIMULTANEOUS EXPLOSION OF 400 20-MEGATON HYDROGEN BOMBS.

THE EVAPORATION-CONDENSATION CYCLE FORCES HOTTER AIR UPWARDS THROUGH THE HURRICANE "EYE" AT SPEEDS EXCEEDING 50 MPH.

Warm Air

Cloud Wall

SOME OF THIS ENERGY IS CONVERTED INTO ENORMOUS SPIRALLING WINDS, WHICH CAUSE ALL THE DAMAGE.

THE KEY FACTOR IN HURRICANES IS THE WALL OF CLOUDS WHICH CARRIES THE HEAT ENERGY UPWARDS, ENCIRCLING AN "EYE" UP TO 100 M. ACROSS.

IF THIS CIRCLE COULD BE ENLARGED, IT WOULD CAUSE THE CIRCULATING WIND SPEED TO DROP CONSIDERABLY, AND PERHAPS HALT THE HURRICANE OFFSHORE.

THE MAIN EFFECT WOULD THEN BE A DOWNPOUR OF RAIN, WITHOUT THE DEVASTATING WINDS.

THE PROBLEM IS TO FIND A MEANS OF DISRUPTING THE WALL OF THE HURRICANE, AND THE ENORMOUSLY POWERFUL WINDS WHICH SUSTAIN IT — FORCES WHICH MAN CANNOT MATCH.

SCIENTISTS SEEKING WAYS OF CONTROLLING HURRICANES NOW BELIEVE THEY MUST FIND SOME INTERNAL INSTABILITY IN THE HURRICANE'S BALANCE OF FORCES.

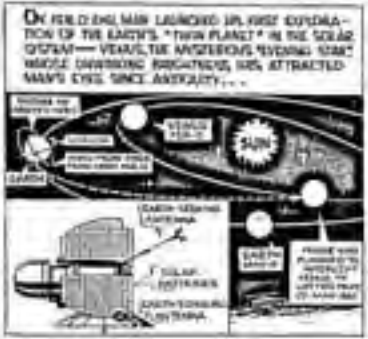
IF THIS INSTABILITY CAN BE TRIGGERED, A COMPARATIVELY SMALL OUTSIDE FORCE MIGHT BE SUFFICIENT TO CAUSE THE TOTAL COLLAPSE OF THE HURRICANE.

A SERIES OF VITAL EXPERIMENTS WHICH BEGAN SOON AFTER WORLD WAR II IS AT LAST BEGINNING TO SHOW DEFINITE RESULTS.

THE FIRST FINDINGS OF "PROJECT STORMFURY" SUGGEST THAT ONE OF MAN'S MOST VICIOUS AND DESTRUCTIVE NATURAL ENEMIES MAY SOON BE TAMED . . .

This week: THE MYSTERIOUS PLANET — Part 1

FRONTIERS OF SCIENCE **This week: IS THERE LIFE ON VENUS? — Part 1**



THE SOVIET SCIENTISTS CHOSE VENUS FOR THE FIRST INTER-PLANETARY SHOT FOR A NUMBER OF REASONS. FIRST, VENUS PASSES CLOSER TO EARTH THAN ANY OTHER PLANET — AT ONE POINT LESS THAN 80 MILLION MILES AWAY. SECOND, THE DIFFERENCE IN SPEED BETWEEN EARTH AND VENUS IS NOT GREAT — 64,000 M.P.H. vs 71,000 M.P.H. FINALLY, SCIENTISTS BADLY NEED INFORMATION ABOUT VENUS, *BECAUSE ITS SURFACE IS PERPETUALLY HIDDEN FROM OUR TELESCOPES BENEATH AN IMPENETRABLE LAYER OF MYSTERIOUS WHITE CLOUDS!*

IS THERE, PERHAPS, LIFE ON VENUS? THAT'S ONE OF THE GREAT MYSTERIES OF THE SOLAR SYSTEM... *AND AT PRESENT THERE ARE TWO DIRECTLY OPPOSED THEORIES ABOUT THIS POSSIBILITY*

FRONTIERS OF SCIENCE

This week: RELATIVITY — Part 1

THE IMMINENT PROSPECT OF SPACE TRAVEL NOW BRINGS MANKIND FACE TO FACE WITH ONE OF THE MOST BAFFLING CONCEPTS IN THE WHOLE OF SCIENTIFIC KNOWLEDGE...
IMAGINE A SPACE TRAVELLER SETTING OFF ON A LONG JOURNEY INTO OUTER SPACE, LEAVING A TWIN BROTHER ON EARTH...
RETURNING TO EARTH AFTER WHAT HAD BEEN TO HIM A JOURNEY OF A YEAR, AT VERY GREAT SPEEDS, THE TRAVELLER WOULD FIND THAT HIS TWIN BROTHER HAD AGED TEN OR EVEN TWENTY YEARS.
..... AND IF THE TRAVELLER STAYED AWAY WHAT WAS, FOR HIM, TWENTY YEARS, HE WOULD FIND THAT ON HIS RETURN CENTURIES HAD PASSED!
IT WAS EINSTEIN WHO EXPLAINED HOW IT IS POSSIBLE TO TRAVEL IN TIME, AS WELL AS IN SPACE, IN HIS THEORY OF RELATIVITY.

FRONTIERS OF SCIENCE **This week: RADIATION — Part 1**

FOR CENTURIES, MAN HAS DREAMED OF TRAVELLING IN SPACE.
MAN
GALAXY
FIRST MEN IN THE MOON
IT WAS BELIEVED THAT ONCE THE TIES OF GRAVITY WERE OVERCOME, FREE TRAVEL COULD BE ACHIEVED.
LIFE IN OUTER SPACE WAS FREELY PICTURED, WITH GREAT EARTH SATELLITES HANDLING ROCKET TRAFFIC.
THIS IDEALISTIC VISION WAS FINALLY SHATTERED IN 1958....

FRONTIERS OF SCIENCE **This week: VOICES FROM THE SKY — Part 1**

DURING THE LAST DAYS OF THE THIRD REICH, ALLIED TROOPS PROBING THE RUBBLE OF BERCHTESGADEN ARMY HEADQUARTERS FOUND A SET OF MYSTERIOUS PLANS...
LOOKS LIKE SOME CRAZY AMERICAN WANT UP IN THE AIR!
BUT HOW COULD YOU IMAGE IT DONE UP? BETTER SHOW IT TO THE CAPTAIN.
ALERTED BY AN OBSERVANT UNIT COMMANDER, ALLIED SCIENTISTS ASKED FOR THE GERMAN PLANS TO BE FLOWN TO WASHINGTON.
WHERE THEY WERE FOUND TO BE DRAWINGS OF A FANTASTIC TERROR WEAPON THAT THE GERMANS PLANNED TO PUT INTO ORBIT ROUND THE EARTH... SAFE BEYOND THE REACH OF ANY DEFENCES.....
. . . A WEAPON WHICH COULD MAKE LIFE IN ANY SELECTED AREA IMPOSSIBLE!